

XXV.—Notes on the Forficularia.
By MALCOLM BURR, F.Z.S., F.E.S.

- I.—*Forficularia* collected by Mr. W. F. H. Rosenberg in Ecuador.
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I.—*FORFICULARIA* COLLECTED BY MR. W. F. H. ROSENBERG
IN ECUADOR.

AMONG a fine collection of Orthoptera which I have received from Mr. W. F. H. Rosenberg, there were twelve species of *Forficularia*, of which no less than seven were new to science; three I have already described in the pages of this Magazine, the remainder work out as follows * :—

Pyragra Saussurei, Dohrn.

Cachabé, 500', XI. '96, 2 ♂, 2 ♀; Chimbo, V. '97, 1 ♀.

This species has been recorded from Mexico, British Honduras, Guatemala, and Costa Rica.

Sparatta nigrina, Stål.

Camp above Chimbo, 3000', VIII. '97, 2 ♂, 1 ♀.

Recorded from Guatemala, Nicaragua, and Rio de Janeiro.

Sparatta armata, sp. n.

S. nigrinæ vicina; statura minore; antennæ 10-segmentatæ; pygidium parvum, quadratum, inerme, apice subsinuatum, angulis acutis; forcipis crura gracilia, subrecta, apice valde decussata, margine interno dente valido medio armata. ♂.

Long. corporis	6 mm.
„ forcipis	2 „

Head black; antennæ with segments 1–7 black, 8–10 white.

Pronotum: anterior border rounded, narrower than the head; posterior border rounded; the two anterior thirds are red, the posterior third black.

Elytra black, truncate at the apex.

Wings projecting well beyond the elytra, black.

Feet testaceous, the tarsi fuscous.

* All the types are in my collection.

Abdomen cylindrical, black; anal segment large, red, quadrate.

Pygidium small, quadrate, the sides slightly dilated, the posterior margin slightly sinuate, the angles pointed.

Forceps with the branches straight, red at the base itself, then black, incurved towards the apex, and strongly decussating, armed on the interior margin at the middle with a strong tooth.

Head, pronotum, elytra, wings, and abdomen pubescent, with short hairs; forceps pubescent, with long fine hairs. ♂.

Patria. Ecuador, camp above Chimbo, 3000', VIII. '97.

This species is closely allied to *S. nigrina*, Stål, but it may be distinguished at once by the much smaller pygidium and shorter forceps, which are armed with only one tooth on each branch inside, and not with two, as in *S. nigrina*.

Psalis Rosenbergi, sp. n.

Statura minore; corpus pilosum; caput convexum; antennæ 15-segmentatæ; pronotum parvum, capite angustius, antice truncatum, postice rotundatum; elytra longa, apice truncata; alæ longæ, valde prominentes; abdomen validum.

Segmentum anale ♂ magnum, medio valde quadrato-emarginatum, lateribus tumidis, margine postico subsinuato, pone angulos emarginato; lamina subgenitalis ♂ magna, apice rotundato-triangularis, media apice sulcata; pygidio nullo; forcipis crura ♂ valida, inermia, basi haud contigua, incurva, apice attenuata et attingentia. Segmentum anale ♀ magnum, margine postico rectum, sulcatum; lamina subgenitalis ♀ obtuse triangularis, haud sulcata; forcipis crura ♀ valida, recta, inermia, tantum apice contigua. ♂ ♀.

	♂.	♀.
Long. corporis	15 mm.	13·5–15 mm.
„ forcipis	2·25 „	1·75–2 „

Head fuscous, varied with reddish; antennæ black, the segments 11–12 white (sometimes it is other segments that are white, the colour of these organs, as in all earwigs, being very variable).

Pronotum black, sometimes varied with reddish.

Elytra black, with a light red spot anterior to the centre.

Wings red, with a dark spot on the inner margin at the apex.

Feet testaceous, the femora broadly banded with black.

Abdomen black, sometimes varied with reddish.

Forceps entirely black.

Patria. Ecuador, Paramba, 3500', IV. '97 (dry season),

1 ♂, 2 ♀; ditto, III. '97, 3 ♀; Chimbo, VIII. '97, 1000', 5 ♀, 1 mutilated specimen; Cachabé, 500', XI. '96, 1 ♀, 2 mutilated specimens.

I have great pleasure in dedicating this handsome species to the intrepid collector Mr. Rosenberg.

It is quite distinct from any other described species of the genus. I have omitted the forceps from the description, as already given in detail in the Latin diagnosis.

I have one specimen, with half the abdomen missing, of a reddish variety, in which the head is entirely red, the pronotum almost entirely so, with one black spot, and the abdomen is red.

Labia arcuata, Scudd.

Camp above Chimbo, 3000', VII. '97, 4 ♂, 2 ♀; Cachabé, low, XI. '97, ♂ ♀.

Labia pallidicornis, Brullé.

Paramba, 3000', V. '97 (dry season), 1 ♂.

Labia, sp. n.

Camp above Chimbo, 3000', VII. '97, 1 ♀.

I refrain from describing this species, as I have only two females and no males.

Labia equatoria, sp. n.

Parva, nitida, glabra; antennæ 8-segmentatæ; pronotum capite angustius, quadratum, antice et postice truncatum, antice quam postice paullo angustius; elytra longa; alæ valde prominentes; pygidium ♂ sat longum, apice subattenuatum, truncatum; segmentum anale ♂ transversum; forcipis crura ♂ basi plus minus dilatata, deplauata, dehinc incurva, attenuata, apicem attingentia; forcipis crura ♀ recta, conica, valida, inermia. ♂ ♀.

	♂.	♀.
Long. corporis	6 mm.	5 mm.
„ forcipis	1.75 „	1.25 „

Head shining black; eyes black; antennæ fuscous.

Pronotum shining, yellow anteriorly, black posteriorly.

Elytra broad, bright shining black.

Wings fuscous, paler at the base.

Feet dark testaceous.

Abdomen cylindrical in ♂, attenuated towards the apex in ♀; shining black, varied with reddish; anal segment varied with reddish.

Pygidium ♂ short and square, slightly narrower at the apex than at the base and sharply truncate, black.

Forceps ♂ with the branches red, varied with black, somewhat dilated at the base, with a small tooth on the inside at the end of the dilated part, then straight and smooth, the apices meeting. ♀ with the branches red, varied with black, straight, conical, smooth, contiguous.

Patria. Ecuador, camp above Chimbo, 3000', VIII. '97, 1 ♂, 1 ♀.

This little species is somewhat like *L. mucronata*. Its most noticeable points are its brilliant shining appearance and the form of the pygidium and forceps of the male.

Spongophora croceipennis (Serv.).

Paramba, 3500', IV. '97 (dry season), 1 ♂.

Spongophora remota (Burr).

Chimbo, 1000', VII. '97, 1 ♂ (type); Cachabé, low, I. '97, 1 ♂, 1 larva; Cachabé, low, XII. '96, ♀ (type); Cachabé to Paramba, II. '97, 2 mutilated specimens.

Spongophora divergens (Burr).

Cachabé, low, XI. '96, 1 ♂, 1 ♀ (type); Paramba, 3500' (dry season), 1 ♂.

The above two species were described by me in this Magazine* as *Forficula*?; but a further examination reveals a deep and long transverse depression on the occiput, showing close relationship with *S. frontalis*, Dohrn, to which M. de Bormans called my attention. They must therefore be included in the genus *Spongophora*.

Opisthocosmia amazonensis, Borm.

Paramba, 3500', V. '97, 1 ♀ (type).

II.—*APTERYGIDA* OR *SPHINGOLABIS*?

The name *Apterygida* has been generally rejected by entomologists, while *Sphingolabis* has been universally accepted. The cause of this was Scudder (5), who wrote in 1875 that "*Apterygida* has no *raison d'être*, and therefore must fall." Now *Apterygida* has a *raison d'être*, and, as I will endeavour to show, must stand at the expense of *Sphingolabis*.

* Ann. & Mag. Nat. Hist. (7) vol. iii. pp. 165 & 166 (1899).

Westwood (3) erected the genus *Apterygida* in 1839 for those species of *Forficula* which had rudimentary wings, i. e. *pedestris*, Bon., and *decipiens*, GénÉ, which fell into Section b, Division II. of GénÉ's (2) arrangement of the genus. Now Scudder is quite correct in saying that *decipiens* cannot be generically separated from *auricularia*, which is the type of *Forficula*, but *pedestris*, Bon. (= *albipennis*, Meg.), can, and must; *albipennis* is the type of *Apterygida*. It is true that Westwood established the genus upon the comparative development of the wings, which in *Forficularia* and Orthoptera generally is now a notoriously variable and untrustworthy character; but the shape of the forceps quite justifies the separation of *albipennis* from *Forficula*, and as there was a genus to hand, of which it was the type, de Bormans's (7) *Sphingolabis*, 1884, is unnecessary.

Of this new genus, which corresponds with Dohrn's (4) Section I. of *Forficula*, the type is *furcifera*, Borm.; but *albipennis* also falls into Section I. of Dohrn's *Forficula*, with the type *albipennis*; the two genera, then, coincide exactly, and *Apterygida*, being the earliest, must stand. The name is unfortunate, but its significance must be forgotten, for it is owing to the forceps, and not to the wings, as originally intended, that it holds good. *Sphingolabis* may be retained for those species which have complete wings or those which have a considerable pygidium, as a subgenus. I am aware that M. de Bormans retains *Sphingolabis*, for he holds that *Apterygida* cannot stand, as erected upon insufficient characters.

Apterygida albipennis (Meg.) and the closely allied *A. arachidis* (Yers.) were included by Brunner (6) in *Chelidura*, Latr.; but this genus must be reserved for those large and heavy flightless forms in which the abdomen is somewhat dilated and the forceps are strong and very stout.

The genera in question must therefore stand as follows:—

Forficula, L. (1), 1758. Type *auricularia*, L.

Apterygida, Westw. (3), 1839. Type *albipennis*, Meg.

(*Sphingolabis*, Borm. (7), 1884, as subgenus. Type *furcifera*.)

Chelidura, Latr., 1825. Type *aptera*, Charp.

Works quoted above.

(1) 1758. LINNÆUS.—'Systema Naturæ,' ed. x. i. 423.

(2) 1832. GénÉ.—'Saggio di una Monografia delle Forficule indigene.' Padova. (Ann. delle Scienze del Regno Lombardo-Veneto, t. ii. p. 215.)

- (3) 1839. WESTWOOD.—‘An Introduction to the Modern Classification of Insects,’ i.
 (4) 1865. DOHRN, H.—“Versuch einer Monographie der Dermapteren” (Stettiner entom. Zeitung, 1865, p. 84).
 (5) 1875. SCUDDER, S. H.—“Critical and Historical Notes on Forficulariæ; including Descriptions of new Generic Forms and an Alphabetical Synonymic List of the described Species” (Proc. Bost. Soc. N. H. xviii. 1875-76, p. 287).
 (6) 1882. BRUNNER VON WATTENWYL, C.—‘Prodromus der europäischen Orthopteren.’ Leipzig.
 (7) 1884. DE BORMANS, A.—“Six nouveaux Forficulaires de Sumatra” (Notes from the Leyden Museum, vi.).

III.—A NEW SPECIES OF *ANISOLABIS* FROM CEYLON.

I have received from Mr. E. E. Green a considerable amount of material from Ceylon, especially of earwigs, which I hope to treat in detail later. One fine new species of *Anisolabis*, however, I describe here.

Anisolabis Greeni, sp. n.

Statura mediocri; corpus totum minutissime granulatum, pilis nonnullis longis pallidis ornatum; antennæ 15-segmentatæ; pronotum quadratum, capite paullo angustius, postice quam antice paullo latius, antice medio subtiliter sulcatum; mesonotum utrinque rudimentaria elytrorum valde prominula gerens; metanotum valde sinuatum; femora compressa: segmentum anale attenuatum, medio sulcatum, in ♂ margine postico tuberculis binis utrinque instructum.

♂ lamina subgenitalis triangularis, obtusa; forcipis crura valida, contigua, conica, inermia, apice valde decussata, crure dextro supra et fortius incurvo.

♀ lamina subgenitalis obtusa, triangularis; forcipis crura recta, valida, basi distantia, medio dente parvo margine interno armata, apicem versus attenuata, incurva, attingentia vel paullo decussata. ♂ ♀.

	♂.	♀.
Long. corporis	11.5-13 mm.	17 mm.
„ forcipis	2 „	3.25 „

Head convex, shining black; palpi and mouth-parts brick-red; antennæ with first segment brick-red, the rest black, except the four apical segments, which are pale.

Pro-, meso-, and metanota shining black.

Abdomen shining black, reddish beneath.

Feet brick-red, the tarsi testaceous; the femora banded with fuscous at the base and at the apex.

Forceps black.

Patria. Ceylon, Punduloya, V. & X. '97, under stones and in bungalows; II. '99, under stones. 3 ♂, 3 ♀.

Typus in coll. mea.

This species will fall into the group of *A. cincticollis*, Gerst. The contrast of the red and the shining black render it a very handsome species, and it is with great pleasure that I dedicate it to my friend Mr. E. E. Green.

IV.—*FORFICULARIA* COLLECTED BY MR. DOHERTY IN
MACASSAR AND NEW GUINEA.

Labidura Dufourii, Desm.

Macassar. 2 ♂.

Labia amæna, Stål.

Humboldt Bay, New Guinea. 1 ♀.

Psalis indica, Hagenb.

Macassar. 1 ♂.

Chelisothes morio, Fabr.

Humboldt Bay, New Guinea. 1 ♀.

Chelisothes Ritsemæ?, Borm.

Macassar. 1 mutilated ♀, which I refer to this species with some doubt.

Chelisothes melanocephalus, Dohrn.

Macassar. 1 ♀.

Chelisothes Dohertyi, sp. n.

Statura minore; caput nigrum; antennæ 17-segmentatæ, quorum 1-13 atra, 14-15 alba, 16 fuscum, 17 nigrum; pronotum ovale, antice et postice rotundatum, rufum; elytra et alæ nigra; pedes rufi; abdomen fusco-rufescens; forcipis crura rufa, recta, inermia, apice attenuata; pygidium nullum. ♀.

	♀.
Long corporis	9 mm.
„ forcipis	2 „

Patria. Macassar. 2 ♀.

Typus in coll. mea.

This species is very close to *Ch. melanocephalus*, but differs

in the colour of the antennæ, elytra, and wings. It is also very close to a new species which I have quoted as a variety of *Ch. melanocephalus*.

“*Chelisoches semiluteus*, de Bormans, sp. n.

“♂, coll. Brunner. Long. corp. (absque forc.) 8.5 mm., forc. 2.5 mm. Mat, des poils pâles. Il reste aux antennes 15 articles, les 4 premiers jaunes; 5–10 bruns; 11, 12 jaunes pâles, 13–15 bruns. Tête noire. Pronotum testacé fauve. Elytres bruns. Ecaïlle alaire brune plus foncée. Pattes testacées fauves. Abdomen rouge brun clair. Pygidium nul. Branches de la pince ♂ courtes, robustes, larges, déprimées, écartées à la base, et formant chacune un arc allongé très régulier jusqu’aux pointes émoussées et contiguës. Arête interne armée de 2 petites dents situées, l’un au quart, l’autre au-delà des $\frac{2}{3}$ de la longueur. W. Java, Pengalengan (*Frühstorfer*), 4000’.”

The above description I have received *in litt.* from M. de Bormans, and to this species I now refer the variety of *Ch. melanocephalus* mentioned by me in this Magazine (*Chelisoches melanocephalus*, Dohrn, var. nov., Burr, Ann. & Mag. Nat. Hist. (6) xx. 1897, p. 315).

The three species in question may be separated as follows:—

1. Elytra flavida *melanocephalus*, Dohrn.
- 1, 1. Elytra fusca vel nigra.
 2. Antennæ articulis 1–13 nigris .. *Dohertyi*, n.
 - 2, 2. Antennæ articulis 1–4 flavidis,
 - 5–10 fuscis *semiluteus*, Borm.

Ch. melanocephalus was described by Dohrn from specimens from Tranquebar. The type of de Bormans’s *semiluteus* in the Brunner collection is from exactly the same locality as the specimen recorded by me as a new variety. A second specimen of the same in my collection shows that the complete antennæ are the same as in de Bormans’s type. The three species will then stand as follows:—

Chelisoches melanocephalus, Dohrn.

Lobophora melanocephala, Dohrn, Stett. ent. Zeit. 1865.

Chelisoches melanocephalus, Scudd. Proc. Bost. Soc. N. H. xviii. 1875–76, p. 308; Borm. Ann. Mus. Civ. Gen. (2) vi. p. 440 (1888); Borm. *op. cit.* xiv. p. 392 (1894) (nec Burr).

Antennæ articulis 1–2 nigris, ceteris brunneis; elytra et alæ flavo-testacea.

Patria. Tranquebar (*Dohrn*), Burmah (*Borm.*), Macassar (coll. m.).

Chelisoches Dohertyi, n.

Antennæ 17-segmentatæ, articulis 1-13 atra, 14-15 alba, 16 fuscum, 17 nigrum; elytra et alæ nigra.

Patria. Macassar (coll. m.).

Chelisoches semiluteus, Borm., n.

Chelisoches melanocephalus, Dohrn, var. nov., Burr, Ann. & Mag. Nat. Hist. (6) xx. p. 315 (1897).

Antennæ 15-segmentatæ, 1-4 testaceis, 5-10 brunneis, 11-12 pallidis, 13-15 fuscis; elytra et alæ fusco-brunnea.

Patria. W. Java, Pengalengan (coll. Brunner, coll. mea).

Chelisoches Feei, Borm.

Milne Bay, New Guinea. 1 ♀.

Opisthocosmia armata, de Haan.

Macassar. 5 ♂.

Opisthocosmia forcipata, de Haan.

5 ♀, Sangir, of the variety with the red head (v. Burr, *op. cit.* p. 316).

Opisthocosmia tenella, de Haan.

Macassar. 1 ♀.

Forficula Alberti, Dubr.

Milne Bay, New Guinea. 1 ♀.

Dormans Park, East Grinstead,
August 3rd, 1899.

XXVI.—*Key to the Isopods of the Pacific Coast of North America, with Descriptions of Twenty-two new Species.* By HARRIET RICHARDSON.

[Continued from p. 187.]

III. VALVIFERA.

Analytical Key to the Families of Valvifera.

- a. Body more or less broad, depressed. Legs usually nearly alike, but first three pairs sometimes with propodus dilated and dactylus reflexed. IX. IDOTEIDÆ.